

REMARKS

The Office Action dated February 28, 2006 has been received and carefully noted. Claims 1-31 were examined. Claims 1-31 were rejected. Claims 1, 9, 17 and 27 are amended. Support for amended claims 1, 9, 17 and 27 can be found in, for example, ¶ [0021]. As such, no new matter has been added. Claims 12 and 19 are amended to correct minor grammatical errors. Claims 32-37 remain cancelled. Claims 1-31 remain. Reconsideration of the pending claims is respectfully requested in view of the following remarks.

The drawings were objected to under 37 C.F.R. § 1.84(p)(5) because, according to the Examiner, they include a referenced character not mentioned in the description: Fig. 3, Ref. 395. Appropriate correction in the Specification has been made to reflect this discrepancy. Accordingly, Applicants are not submitting amended drawings and Applicants respectfully request that the objection to the drawings be withdrawn.

I. Claims rejected under 35 U.S.C. § 102(b)

Claims 1-3, 5-11, 13-18 and 20-31 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent Pub. No. 2001/0008496 to Leung et al. ("*Leung*"). A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. MPEP § 2131. Applicant respectfully submits that each and every element in independent claims 1, 9, 17 and 27 is not set forth in the cited reference.

Independent claims 1, 9, 17 and 27 include the limitation of "the refresh logic to monitor the first memory bus to identify a time to carry out refresh operations." *Leung* describes a memory that must be periodically refreshed. (Abstract). According to *Leung*, a memory controller includes a refresh manager that monitors the number of idle cycles on the system bus during a refresh period. (p.1, ¶ [0010]). Refresh managers 600, 700 and 800 are each located *in* memory controller. (p.7, ¶ [0081]). A memory refresh operation is performed during an idle clock signal. (p.5, ¶ [0059]). The refresh request is generated by a refresh controller 207 and sent to arbiter 206 which arbitrates whether to process the refresh request. (p.5, ¶ [0059]). The timing of the refresh request generated is determined from the system clock speed. (p.5, ¶ [0059]). Thus,

in contrast to claims 1, 9, 17 and 27, a refresh request according to *Leung* is determined from the system clock speed, not by monitoring of a memory bus for a time to carry out refresh operations. Thus, *Leung* does not include each and every element of independent claims 1, 9, 17 and 27. Claims 2-8, 10-16, 18-26 and 28-31 include all of the limitations of their respective independent claims. Therefore, *Leung* does not anticipate these claims. Accordingly, Applicants respectfully submit that independent claims 1, 9, 17 and 27 and their respective dependent claims are patentable in view of *Leung*.

II. Claims rejected under 35 U.S.C. § 103(a)

Claim 4, 12 and 19 were rejected under 35 U.S.C. § 103(a) as obvious over *Leung* in view of U.S. Patent No. 6,925,086 to Curtis ("*Curtis*"). To establish a *prima facie* case of obviousness: (1) there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference; (2) there must be a reasonable expectation of success; and (3) the references when combined must teach or suggest all of the claim limitations. MPEP § 2142. Applicant respectfully submits that a *prima facie* case of obviousness has not been established.

More particularly, the references when combined do not teach or suggest all of the claim limitations of dependent claims 4, 12 and 19. *Curtis* discloses a packet memory system. (Abstract). As discussed previously, independent claims 1, 9 and 17 include the limitation of "the refresh logic to monitor the first memory bus to identify a time to carry out refresh operations." Dependent claims 4, 12 and 19 depend from independent claims 1, 9 and 17, respectively.

For the reasons set forth above in regard to independent claims 1, 9 and 17, *Leung* does not teach the elements of claims 1, 9, and 17. *Curtis* does not cure these defects of *Leung*. The Examiner has not relied upon and the Applicants have been unable to discern any part of *Curtis* that discloses these elements of claims 1, 9 and 17. Thus, neither *Leung* nor *Curtis* includes the limitations set forth in independent claims 1, 9 and 17, which are limitations included in dependent claims 4, 12 and 19. Accordingly, Applicants respectfully submit that dependent claims 4, 12 and 19 are patentable over *Leung* in view of *Curtis*.

CONCLUSION

In view of the foregoing, it is believed that all claims now pending patentably define the subject invention over the prior art of record and are in condition for allowance and such action is earnestly solicited at the earliest possible date.

Respectfully submitted,

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5-12-06
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